



FSN

Wireless Imaging System

Instructions for Use

Model: WUH4000

Part Numbers: FHD-1TX-1RX
FHD-1TX-2RX
WUH4000
WUH4000-D

Model: WUH4060

Before connecting, operating or adjusting this product, please read this instruction booklet carefully and completely.

English

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The specifications and information in this document are subject to change without notice.

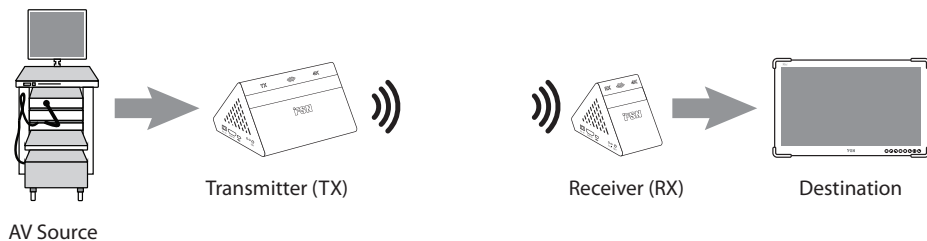


Instructions for Use for this product are also available in electronic form (eIFU). Choose from several languages. Use Adobe Acrobat software to view eIFUs. Access the eIFUs online at fsnmed.com/support/eifu/

Product Description / Intended Use

WUH4000 Wireless Imaging System

Carefully read all instructions prior to use. Observe all contraindications, warnings and precautions noted in these directions. Failure to do so may result in patient complications.



Device Description

The 60Ghz WUH4000 transmitter wirelessly transmits high quality audio and video to a paired WUH4000 receiver in a typical operating room. The transmitter is designed to be connected to a video source (such as an endoscopic camera) with the receiver connected to a video monitor.

Two WUH4000 transmitter/receiver systems operating at different frequencies within the 60Ghz band can be used simultaneously within the same room.

The WUH4000 is designed to be unaffected by cell phones, RFID, wireless 802.11 b/g/n. The 60Ghz operating frequency cannot pass through walls and will work within a 10m radius. 256-bit AES encryption ensures that no other devices can speak with the WUH4000.

The WUH4000 transmitter dimensions are:

75.8 mm (2.98 in.) high x 140 mm (5.51 in.) wide x 98.25 mm (3.87 in.) deep.
Weight is approximately .57 kg (1.25 lbs).

The WUH4000 receiver dimensions are:

75.8 mm (2.98 in.) high x 55 mm (2.17 in.) wide x 98.25 mm (3.87 in.) deep.
Weight is approximately .23 kg (.5 lbs).

Both components are mains powered (100 – 240 V).

The WUH4000 wireless device is a non-sterile reusable device not intended for use in the sterile field.

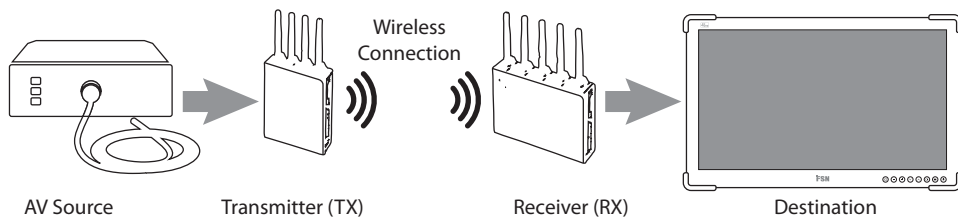
Caution: Federal (U.S.A.) law restricts this device to sale by or on the order of a physician.

Part Number	Transmitters	Receivers	Designed for FHD	Designed for 4K
FHD-1TX-1RX	1	1	•	
FHD-1TX-2RX	1	2	•	
WUH4000	1	1		•
WUH4000-D	1	2		•

Product Description / Intended Use

WUH4060 Wireless Imaging System

Carefully read all instructions prior to use. Observe all contraindications, warnings and precautions noted in these directions. Failure to do so may result in patient complications.



Device Description

The 5Ghz WUH4060 transmitter wirelessly transmits high quality audio and video to a paired WUH4060 receiver in a typical operating room. The transmitter is designed to be connected to a video source (such as an endoscopic camera) with the receiver connected to a video monitor.

Up to six WUH4060 transmitter/receiver pairs can be used simultaneously.

The WUH4060 is designed to avoid conflicts with other wireless devices. The system is designed to link within the same room, and will work on the same floor within a 30 meter radius. 256-bit AES encryption ensures that no other devices can speak with the WUH4060.

The WUH4060 transmitter dimensions are:

132 mm (5.20 in.) high x 91 mm (3.58 in.) wide x 27 mm (1.06 in.) deep.
Weight is approximately 360g (.79 lbs).

The WUH4060 receiver dimensions are:

112 mm (4.41 in.) high x 139 mm (5.47 in.) wide x 27 mm (1.06 in.) deep.
Weight is approximately 434g (.96 lbs).






























Both components are mains powered (100 – 240 V).

The WUH4060 wireless device is a non-sterile reusable device not intended for use in the sterile field.

Caution: Federal (U.S.A.) law restricts this device to sale by or on the order of a physician.

Symbol Definitions

The following symbols appear on the product, its labeling, or the product packing. Each symbol carries a special definition, as defined below:

	Do not disassemble		Power adapter		Consult accompanying documents
	Non-ionizing electromagnetic radiation		Indicates top-bottom direction		Korea Certification
	DC Power control switch		Fragile		Unique Device Identifier
	Do not get wet		Voluntary Control Council for Interference - Japan		Wireless link status
	Consult the operating instructions		Indicates the manufacturer		Catalog Number
	Indicates the manufacturing date		Authorized representative in the European community		Medical Device
	Serial Number		Humidity limitation		Consult the operating instructions - electronic
	Temperature limitation		Atmospheric pressure limitation		Importer Entity
	UK Conformity Assessed				
	Indicates proof of conformity to EU 2017/745 Medical Devices Regulation and applicable standards.				
	Medical Equipment is in accordance with ANSI/AAMI ES60601-1: A1:2012, C1:2009/(R)2012 and A2:2010/(R)2012, CSA CAN/CSA-C22.2 NO. 60601-1:14. Medical electrical equipment Part 1: General requirements for basic safety and essential performance.				
	Tested to comply with FCC Class B standard (USA).				
	Waste electrical and electronic equipment (WEEE Directive 2012/19/EU). This symbol indicates that the waste of electronic equipment must not be disposed as unsorted municipal waste and must be collected separately. Please contact the manufacturer or other authorized disposal company to decommission your equipment.				

Note: A printed copy of the manual in English is provided with the product. Users within EU member states, please contact local distributor for other languages. This applies to EU member states where the product has been purchased through authorized channels.

Indications for Use

The Wireless Imaging System consists of a wireless transmitter and a receiver which delivers high quality audio and video signals from sources such as endoscopy or laparoscopy camera systems, or other video sources over radio-frequency to display images during general surgical procedures. The Wireless Imaging System components are non-sterile reusable devices not intended for use in the sterile field.

External equipment intended for connection to signal input, signal output or other connectors, shall comply with relevant IEC standard (e.g., IEC 60950 for IT equipment and IEC 60601 series for medical electrical equipment). In addition, all such combination systems shall comply with the standard IEC 60601-1-1, safety requirements for medical electrical systems. Any person who forms a system is therefore responsible for the system to comply with the requirements of IEC 60601-1-1. If in doubt, contact a qualified technician or your local representative.

Contraindications



This device is not intended to be used in the vicinity of diathermy equipment.



This device is not intended to be used in the sterile field.

Intended User

Wireless Systems are intended to be used by trained video system professionals.

Warning

Before connecting the AC power cord to the system, make sure the recommended voltage designation on the cord corresponds to the available power source.

Never use this system with a damaged power cord. Do not allow anything to rest on the power cord. Keep the power cord away from areas where it may cause tripping.

Be sure to hold the plug, not the power cord, when disconnecting from an electric socket.

If this system does not operate normally, in particular, if there are any unusual sounds or smells coming from it unplug it immediately and contact an authorized dealer or service center.

Put this system in a location with low humidity and a minimum amount of dust. Locate it near an easily accessible AC outlet.

Warning

Openings in this system's cabinet are provided for ventilation. To prevent overheating, these openings should not be blocked or covered. If placed in an enclosed space, be sure to provide adequate ventilation. Do not attempt to disassemble or modify this product. Only authorized personnel should perform service. Never insert anything metallic into the cabinet openings and vents. Doing so may create the danger of electrical shock, and will void the warranty.

Do not touch signal input, signal output or other connectors, and the patient simultaneously. This system should be installed and operated with a minimum distance of 20 cm between equipment and body. This device is intended to provide video transmission only to a secondary monitor or display for administrative, educational, or backup purposes; it is not intended to provide primary video transmission. This system is for indoor use only.

Power



Use only a properly grounded plug and voltage. An improper ground may cause electric shock or equipment damage.

WARNING: This is a radio-frequency (RF), radiation emitting device that has non-thermal biological effects for which no safety guidelines have yet been established. Controversy exists as to whether these effects are harmful to humans. Exposure to RF radiation may be reduced by limiting your use of this device and keeping away from the head and body.

Repair



Unplug the apparatus from its power source and refer servicing to qualified personnel under the following conditions:

- If the power cord or plug is damaged or frayed.
- If objects have fallen into the apparatus.
- If the cabinet has been damaged.
- If the apparatus emits smoke or abnormal odor.
- If the apparatus has been subjected to excessive shock by being dropped.
- If the apparatus fails to operate in accordance with the operating instructions.
- If liquid has been spilled into the apparatus.
- If the apparatus has been exposed to rain or moisture.
- If the apparatus seems to be overheated.

Biohazards

To prevent spreading of infections, this device should only be used in environments where biological decontamination can be successfully performed.

Returned Product

After troubleshooting, if problems persist, disinfect the product and return it to FSN using the original packaging. Include the accessories that came with the product in the return shipment. Please enclose a brief explanation of the malfunction.

Contact FSN Medical Technologies for a Return Authorization Number and instructions, prior to returning the device.

Precautions

Always treat the product with care and keep it in a clean and dust-free environment.



Do not expose the product to liquid, moisture, or humidity.

Do not use your product in temperatures above 40°C when unit is operational.



Do not drop or throw the product.

Accessories

Use only accessories specified by the manufacturer, or sold with the apparatus. Do not use different AC adapters.

Replace damaged equipment. If damage is found call your COMPANY representative. Do not attempt to operate the system before thoroughly reading these Instructions for Use. For future reference, keep these documents in a convenient, easily accessible place.

Installation

Do not connect any other wires or accessories which don't comply with this system to this system.

An improper wire may cause electric shock or equipment damage. Insert wire connections firmly so that they do not come loose.

A bad connection may cause a fault. Do not stack and locate close to other equipment.

To prevent fire or shock hazards, do not expose this unit to rain or moisture. Do not use this unit's polarized plug with an extension cord receptacle or other outlets unless the prongs can be fully inserted. This device is designed to meet the medical safety requirements for a patient vicinity device.

This device may not be used in connection with life support equipment.

Others

Please contact this equipment's supplier when you want to use this system with unknown equipment. Please power off and pull out the power cord when you want to move this system to another place.



Underwriters Laboratories (UL) Classification:

UL safety Compliance:

This system is U.L. Classified WITH RESPECT TO ELECTRIC SHOCK, FIRE AND MECHANICAL HAZARDS ONLY IN ACCORDANCE WITH UL 60601-1/CAN/CSA C22.2 NO. 601.1

EU Conformity and EMC Compliance:

This system meets the requirements of EN-60601-1 so as to conform to the Medical Device Directive 93/42/EEC (general safety information).

In addition this system conforms with the essential requirements of Annex 111, Module B, of the Council Directive 2014/53/EU on Radio Equipment (RED) and the mutual recognition of their conformity, in relation to the essential requirements of:

Article 3.1 (a) Health and Safety	EN 62311 :2008 EN 60950-1 :2006 +A11:2009 + A12:2011 + A1:2010 + A2:2013
Article 3.1(b) EMC	Draft EN 301 489-17 v3.2.0, Draft EN 301 489-1 V2.2.0
Article 3.2 Radio Spectrum	EN 302 567 V2.1.1
Article 3.3 a-i (Special Features)	None are applicable.

This unit uses plug for US: 120V rating 5-15P type only.

This system complies to the above standards only when used with the supplied medical grade power supply.

Wireless Imaging System	Power Supply
WUH4000	Adapter Technology ATM036T-P050
WUH4060	CUI INC SDM36-12-U-P5

Caution: Make sure the power cord is the correct type that is required in your area.

This system has a universal power supply that allows operation in either 100-120V AC or 200-240V AC voltage areas (no user adjustment is required).

Use the proper power cord with correct attachment plug type. If the power source is 120V AC, use a Hospital Grade Power Cord with NEMA 5-15 style plug, labeled for 125 volts AC with UL and C-UL approvals.

If the power source is a 240 V AC supply, use the tandem (T blade) type attachment plug with ground conductor power cord that meets the respective European country's safety regulations.

Classification

- Protection against electrical shock: Class I including AC/DC power.
- Applied parts: no applied parts.
- Degree of safety in the presence of flammable anesthetics mixture with air or with oxygen or with nitrous oxide. Not suitable for use in the presence of a flammable anesthetics mixture with oxygen or with nitrous oxide.
- Mode of operation: continuous



FCC Warnings

This equipment has been tested and found to comply with the limits of a Class B digital device, pursuant to Part 15, Subpart B of the FCC rules. These limits are designed to provide reasonable protection against interference. This system can radiate radio frequency energy and, if not installed and used in accordance with the instructions, it may interfere with other radio communications equipment.

There is no guarantee that interference will not occur in a particular installation. If this equipment is found to cause harmful interference to radio or television reception, the user is encouraged to try to correct the interference by carrying out one or more of the following measures:

1. Reorient or relocate the receiving antenna.
2. Increase the distance between this system and the subject of interference.
3. Plug this system into an outlet on a different electrical circuit than that to which the subject of interference is connected.
4. Consult the dealer or an experienced radio/TV technician for help.

NOTICES TO USER :

This device complies with the requirements of FCC CFR 47 Part 15, Subpart B. Operation is subject to the following two conditions:

- 1) This device may not cause harmful interference.
- 2) This device must accept any interference received, including interference that may cause undesired operation.

However, if used incorrectly, RF interference could hamper its operation or the operation of other nearby electrical devices. If you suspect either of these conditions, move the conflicting equipment farther apart, separate the equipment with an RF barrier, or discontinue use of the system.

This equipment generates or uses radio frequency energy. Changes or modifications to this equipment may cause harmful interference unless the modifications are expressly approved in the instruction manual. The user could lose authority to operate this equipment if an unauthorized change or modification is made.

Any serious incident that has occurred in relation to the device should be reported to the manufacturer and the competent authority of the Member State in which the user and/or patient is established. Contact your local FSN Medical Technologies sales representative for information on changes and new products.

The FSN wireless imaging system is intended to be used as a pair (transmitter and receiver) to redundantly display video where needed. The wireless device is a non-sterile, reusable device, not intended for use in the sterile field.

FCC Appendix


Manufacturer's declaration - electromagnetic emission

The WIRELESS IMAGE system is intended for use in the electromagnetic environment specified below. The customer or the user of the WIRELESS IMAGE system should assure that it is used in such an environment.		
Emission test	Compliance	Electromagnetic environment -guidance
RF Emissions CISPR 11	Group 1	The WIRELESS IMAGE system is suitable for use in all establishments other than domestic and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.
RF Emissions CISPR 11	Class A	
Harmonic emissions IEC 61000-3-2	A	
Voltage fluctuations IEC 61000-3-3	Complies	

Manufacturer's declaration - electromagnetic immunity

This WIRELESS IMAGE system is intended for use in the electromagnetic environment specified below. The customer or the user of the WIRELESS IMAGE system should assure that it is used in such an environment.			
Immunity test	IEC 60601 Test level	Compliance level	Electromagnetic environment-guidance
Electrostatic discharge(ESD) IEC 61000-4-2	6 kV contact 8 kV air	6 kV contact 8 kV air	Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30%
Electrical fast transient-burst IEC 61000-4-4	2 kV for power supply lines 1 kV for input/output lines	2 kV for power supply lines 1 kV for input/output lines	Main power quality should be that of a typical commercial or hospital environment.
Surge IEC 61000-4-5	1 kV differential mode 2 kV common mode	1 kV differential mode 2 kV common mode	Main power quality should be that of a typical commercial or hospital environment.
Power frequency (50/60Hz) Magnetic field IEC 61000-4-8	3.0 A/m	3.0 A/m	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.
Voltage dips, short Interruptions and voltage variations on power supply input lines IEC 61000-4-11	<5% U_T (>95% dip in U_T) for 0.5 cycle 40% U_T (60% dip in U_T) for 5 cycle 70% U_T (30% dip in U_T) for 25 cycle <5% U_T (<95% dip in U_T) for 5 sec.	<5% U_T (>95% dip in U_T) for 0.5 cycle 40% U_T (60% dip in U_T) for 5 cycle 70% U_T (30% dip in U_T) for 25 cycle <5% U_T (<95% dip in U_T) for 5 sec.	Main power quality should be that of a typical commercial or hospital environment. If the user of WIRELESS IMAGE system requires continued operation during power mains interruptions, it is recommended that WIRELESS IMAGE system be powered from an uninterruptible power supply or a battery.
Note: U_T is the A.C. mains voltage prior to application of the test level.			

This WIRELESS IMAGE system is intended for use in the electromagnetic environment specified below. The customer or the user of this WIRELESS IMAGE system should assure that it is used in such an environment.

Immunity test	IEC 60601 Test level	Compliance level	Electromagnetic environment-guidance
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz to 80MHz	3 Vrms 150 kHz to 80MHz	<p>Portable and mobile RF communications equipment should be used no closer to any part of the WIRELESS IMAGE system, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter.</p> <p>Recommended separation distance: d</p> $d = \left[\frac{3,5}{V_1} \right] \sqrt{P}$
Radiated RF IEC 61000-4-3	3 V/m 80.0 MHz to 2.5 GHz	3 V/m 80.0 MHz to 2.5 GHz	<p>Recommended separation distance</p> $d = \left[\frac{3,5}{E_1} \right] \sqrt{P} \quad \begin{array}{l} 80 \text{ MHz to} \\ 800 \text{ MHz} \end{array}$ $d = \left[\frac{7}{E_1} \right] \sqrt{P} \quad \begin{array}{l} 80 \text{ MHz to} \\ 2.5 \text{ GHz} \end{array}$ <p>Where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation distance in meters (m). Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, (a) Should be less than the compliance level in each frequency range (b).</p> <p>Interference may occur in the vicinity of equipment marked with the following symbol:</p> 

Note 1) U_T is the A.C. mains voltage prior to application of the test level.

Note 2) At 80MHz and 800 MHz, the higher frequency range applies.

Note 3) These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

- a. Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the EUT is used exceeds the applicable RF compliance level above, the EUT should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as re orienting or relocating the EUT.
- b. Over the frequency range 150 kHz to 80 MHz, field strengths should be less than $[V_1]$ V/ m.

Recommended separation distances between portable and mobile RF communications equipment and the WIRELESS IMAGE system.

The WIRELESS IMAGE system is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The user of the WIRELESS IMAGE system can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the WIRELESS IMAGE system as recommended below, according to the maximum output power of the communications equipment.


Rated maximum output power [W] of transmitter	Separation distance according to frequency of transmitter[m]		
	150kHz to 80MHz	80MHz to 800MHz	800MHz to 2.5GHz
0.01	0.12	0.12	0.23
0.1	0.37	0.37	0.74
1	1.17	1.17	2.33
10	3.70	3.70	7.37
100	11.70	11.70	23.30

For transmitters rated at a maximum output power not listed above, the recommended separation distance (d) in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

Note 1) At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.

Note 2) These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

Guidance and manufacturer's declaration - electromagnetic immunity

This WIRELESS IMAGE system is intended for use in the electromagnetic environment specified below. The customer or the user of this WIRELESS IMAGE system should assure that it is used in such an environment.			
Immunity test	IEC 60601 Test level	Compliance level	Electromagnetic environment-guidance
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz to 80MHz	3 Vrms 150 kHz to 80MHz	WIRELESS IMAGE system must be used only in a shielded location with a minimum RF shielding effectiveness and, for each cable that enters the shielded location with a minimum RF shielding effectiveness.
Radiated RF IEC 61000-4-3	3 V/m 80.0 MHz to 2.5 GHz	3 V/m 80.0 MHz to 2.5 GHz	Field strengths outside the shielded location from fixed RF transmitters, as determined by an electromagnetic site survey, should be less than 3V/m (a). Interference may occur in the vicinity of equipment marked with the following symbol: 
<p>Note 1) These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.</p> <p>Note 2) It is essential that the actual shielding effectiveness and filter attenuation of the shielded location be verified to assure that they meet the minimum specification.</p>			
<p>Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength outside the shielded location in which the EUT is used exceeds 3V/m, the EUT should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as relocating the EUT or using a shielded location with a higher RF shielding effectiveness and filter attenuation.</p>			

FCC Caution:

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

IC Class B Statement (Canada)

This Class B digital apparatus complies with Canadian ICES-003 and RSS-210. Cet appareil numérique de la classe B conforme à la norme NMB-003 et RSS-210 du Canada. Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

EU Declaration of Conformity (DoC)

Hereby declares that this device is in compliance with the essential requirements and other relevant provisions of the Medical Device Regulation (EU) 2017/745 and the EU RoHS Directive 2011/65/EU+2015/863/EU. This device is determined to be Class I according to Rule 1 of Annex VIII of MDR 2017/745.

Maintenance of Quality of Service WUH4000

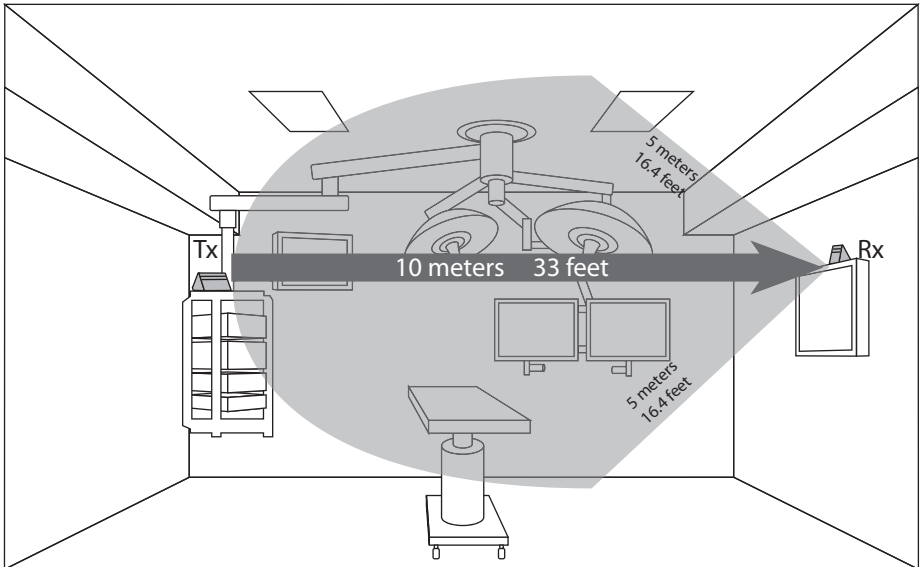
WUH4000 is designed to maintain an adequate Quality of Service during its use in a hospital operating room environment.

Design Characteristics: Interference from other WUH4000 Devices

The WUH4000 uses Beam Forming Non Line Of Sight technology (BFNLOS). As a result, WUH4000 links in one location will NOT transmit through solid walls or doors with WUH4000 devices in another location. Using BFNLOS, the WUH4000 has been tested to work consistently within a 10m radius of the transmitter.

Using its unique mating procedure, the WUH4000 transmitter is constructed to work only with the WUH4000 authenticated receivers. It's HDCP protocol not only blocks hackers from high jacking or altering a signal, but it also stops other WUH4000 Transmitters/Receivers from breaking into the communication between linked Transmitter and Receiver. If more than one WUH4000 wireless systems are operating simultaneously in a single room, each will be on a separate frequency within the 60GHz band and can support up to a maximum of 2 receivers within that room.

As a result of these design considerations, it is not possible for one WUH4000 System to interfere with another WUH4000 System.



Maintenance of Quality of Service WUH4000

Design Considerations: Interference from other Devices

The WUH4000 is validated to be compatible with other devices that are commonly found in an operating environment, in accordance with IEC 60601-1-2. In that testing, the WUH4000 needed to maintain the following Essential Performance to ensure that its performance was adequate when the System was exposed to other electronic equipment. WUH4000 Essential Performance requires that a viewable image shown on a secondary monitor via a WUH4000 pair be consistent with the following criteria:

1. A viewable image is generated
2. There is no flickering of the image
3. There is no clipping of any edges
4. Brightness and detail of image remains consistent across the whole image

These criteria ensure that no resultant video degradation could be judged to be clinically significant.

For best results, verify the following:

The TX and RX are facing each other.

The TX and RX are no more than 10 meters apart.

The TX and RX are between 6-10 ft above the floor.

The TX and RX are not in a confined location.

Noninterference Distances

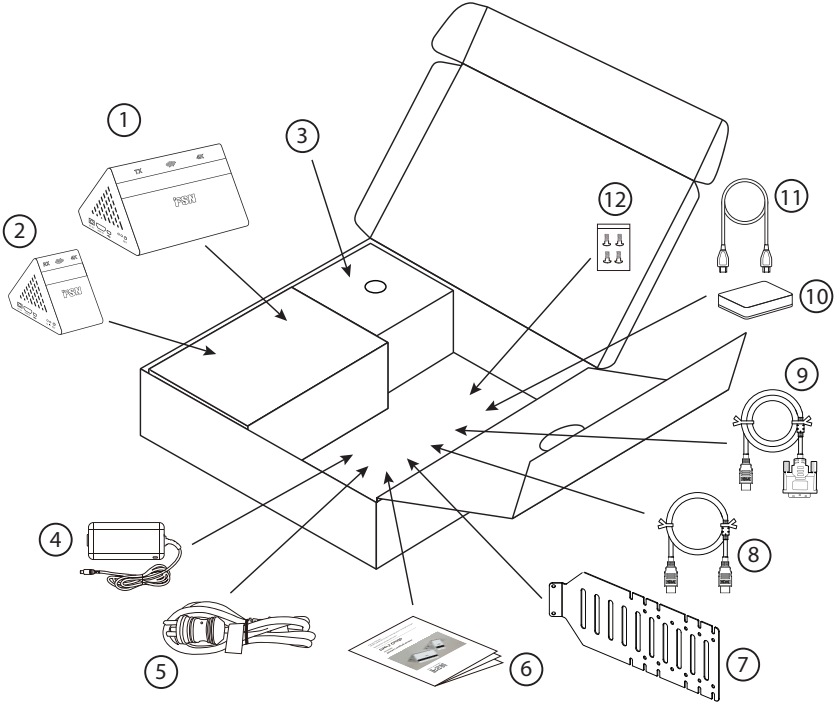
The following minimum distances have been tested to demonstrate noninterference between the listed devices and the WUH4000. If the WUH4000 is thought to be causing or receiving interference with the following devices, then move the devices away from each other, maintaining at least the following separations:

Equipment	Transmitter	Receiver
Electrocautery	> 610 mm, (24 inches)	> 305 mm, (12 inches)
RFID	> 10 mm, (.39 inches)	> 10 mm, (.39 inches)
2.4GHz Wireless	> 152 mm, (6 inches)	> 152 mm, (6 inches)
5.8 GHz Wireless	> 152 mm, (6 inches)	> 152 mm, (6 inches)
Cell Phone	> 10 mm, (.39 inches)	> 10 mm, (.39 inches)
Bluetooth	> 10 mm, (.39 inches)	> 10 mm, (.39 inches)

The WUH4000 is not intended to be used in the vicinity of diathermy equipment. If diathermy equipment is operated around the WUH4000 and interference is suspected, turn off the WUH4000 Transmitter and Receiver.

Package Contents

Part No.: FHD-1TX-1RX (Model: WUH4000)



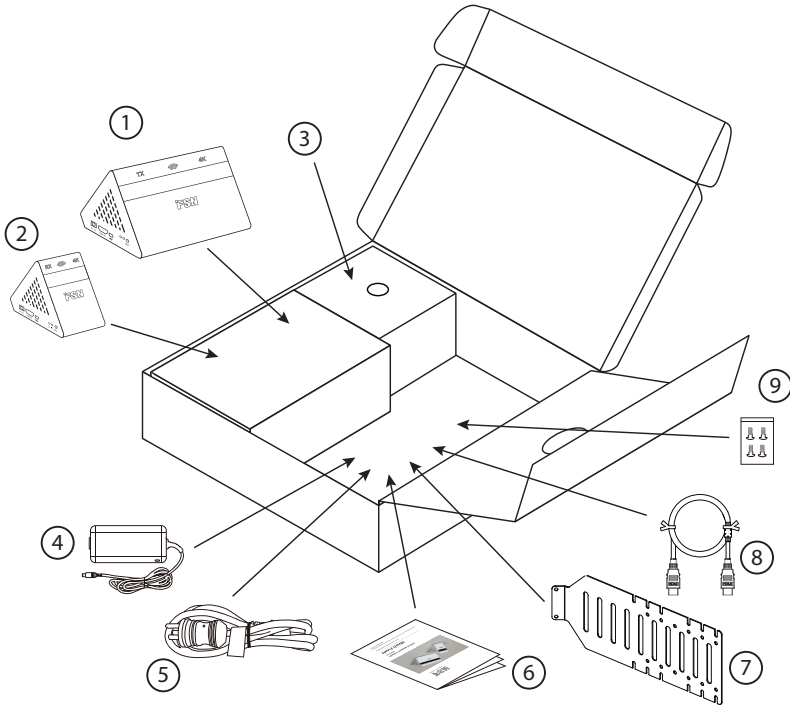
Item	Description	Quantity
1	Wireless transmitter (TX unit)	1
2	Wireless receiver (RX unit)	1
3	Partition	1
4	Power adapter	2
5	Power cord	2
6	User guide	1
7	Monitor VESA mount bracket	2
8	HDMI 1.4 to HDMI 1.4 cable, 1.5 feet	1
9	HDMI to DVI cable, 1.5 meter*	2
10	Video splitter/adaptor (optional, if required)	1
11	Micro USB cable for power from wireless receiver to splitter/adaptor, 1.5 feet	1
12	Mounting screw packet	1

* Option is available for one of the two cables to be 3 meter.

Verify that all components for the respective package are accounted for. Inspect each component to verify that none have been tampered with in any way.

Package Contents

Part No.: WUH4000 (Model: WUH4000)



Item	Description	Quantity
1	Wireless transmitter (TX unit)	1
2	Wireless receiver (RX unit)	1
3	Partition	1
4	Power adaptor	2
5	Power cord	2
6	User guide	1
7	Monitor VESA mount bracket	2
8	HDMI 2.0 to HDMI 2.0 cable, 2 meter	2
9	Mounting screw packet	1

Verify that all components for the respective package are accounted for. Inspect each component to verify that none have been tampered with in any way.

Plan the Installation WUH4000

Identify the signal source for wireless transmission (example **A**).

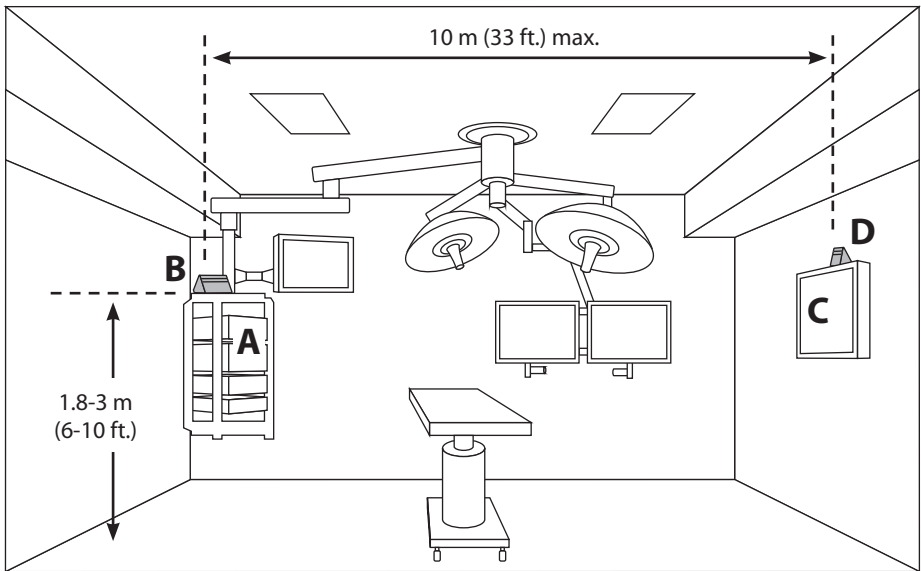
Determine the location of the WUH4000 transmitter (TX) unit (example **B**).

Find a suitable power source for the transmitter.

Identify the destination to receive the wireless signal (example **C**).

Determine the location of the WUH4000 receiver (RX) unit (example **D**).

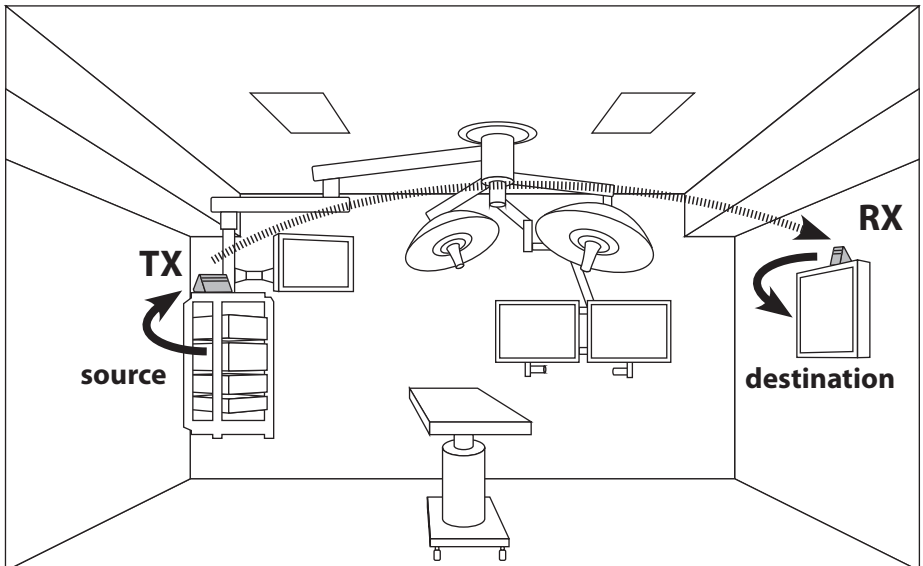
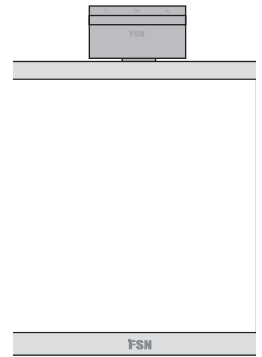
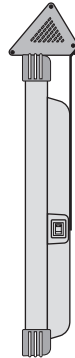
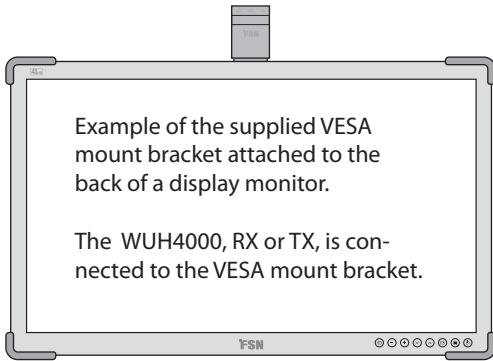
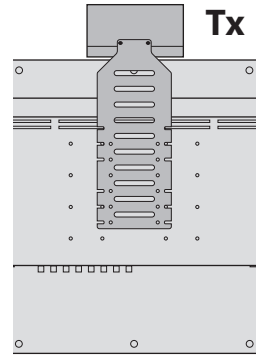
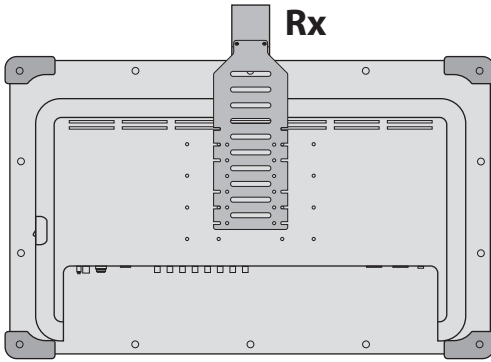
Find a suitable power source for the receiver.



The transmitter and receiver units can stand alone on a flat surface, or use a bracket to mount onto other objects such as a display monitor. It is recommended to verify that the wireless system is operating properly before mounting the TX or RX units permanently.

For best installation results:

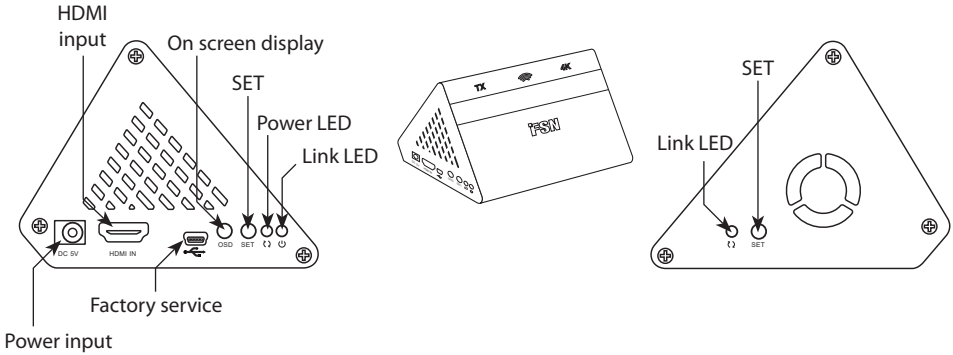
- The TX and RX should face each other.
- The TX and RX should be no more than 10 meters (33 ft.) apart.
- The TX and RX should be between 1.8-3 meters (6-10 ft.) above the floor.
- The TX and RX should not be in a confined location.



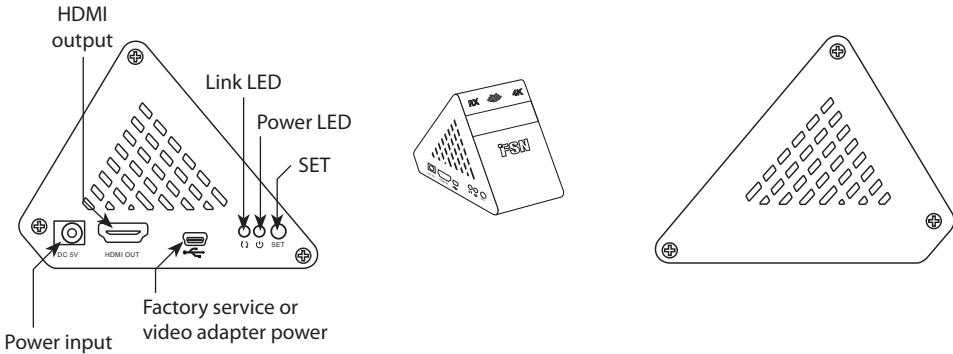
A properly operating wireless system

Panel Interface WUH4000

Transmitter



Receiver



HDMI - Connects source signal to transmitter, or connects receiver to signal end point destination.

Link LED - Amber color. Shows the status of the wireless connection between a TX and RX unit.

Power LED - Green color. Shows if the TX and RX units have power or not.

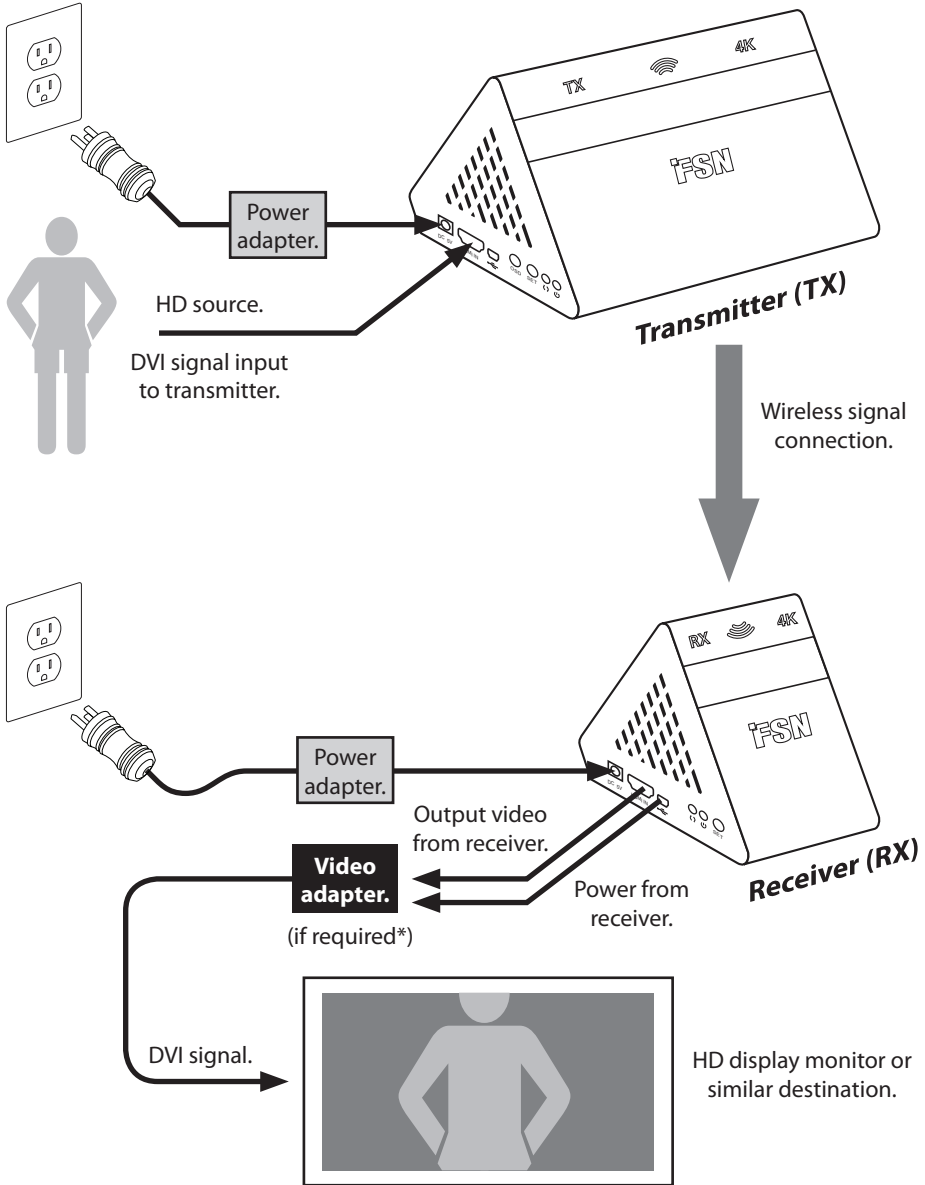
SET button - Will reactivate the WUH4000 system if in sleep mode.

Power input - Supplies power to the TX or RX units.

Factory service - Used for authorized manufacturer diagnostics or upgrades.

Typical Configuration / Directions for Use

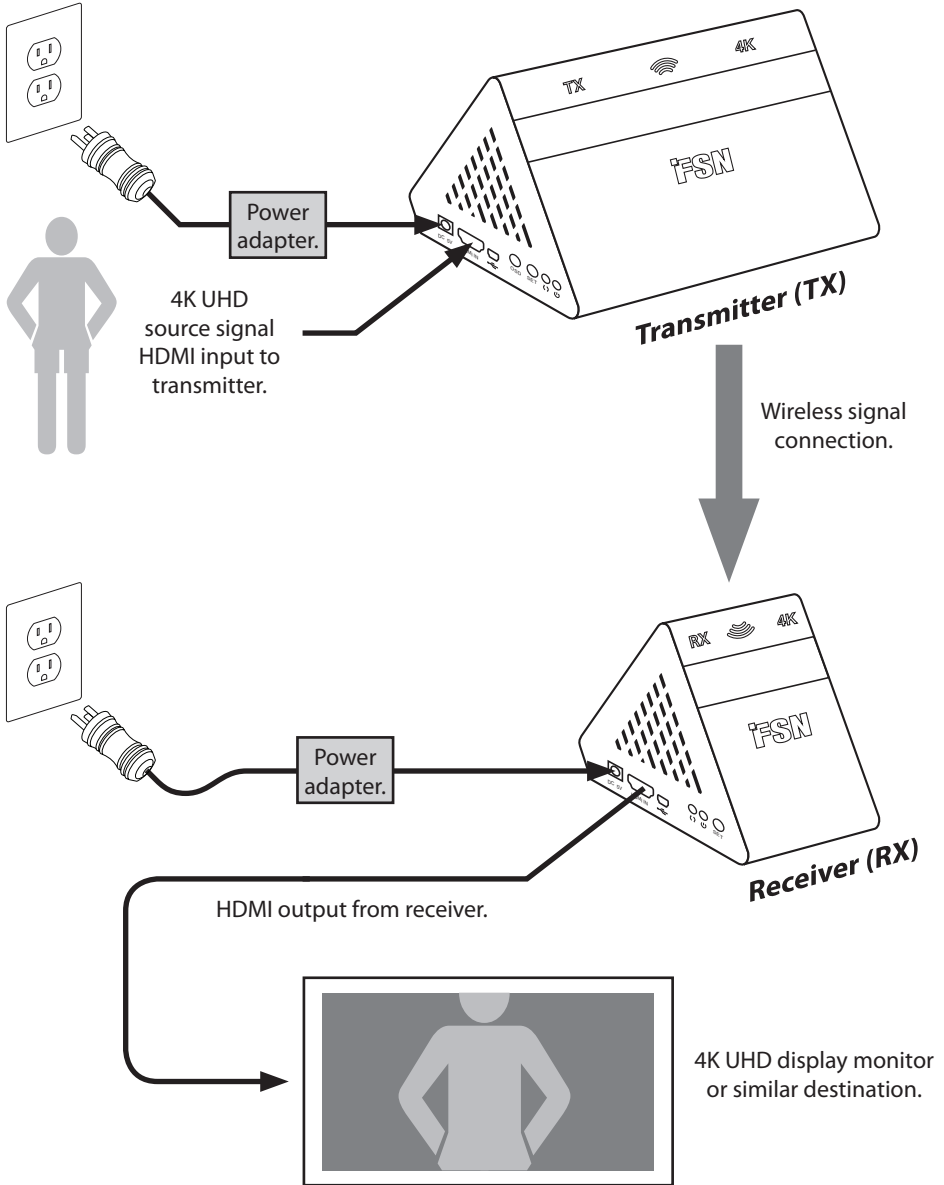
Part No.: FHD-1TX-1RX, FHD-1TX-2RX (Model: WUH4000)



***Video Adapter** Most HD display monitors using a DVI signal can be connected directly to the WUH4000 receiver (RX) unit. However, if WUH4000 is unable to successfully transmit video from the TX to the RX, then the video adapter that is supplied with WUH4000 may be required to establish a successful connection.

Typical Configuration / Directions for Use

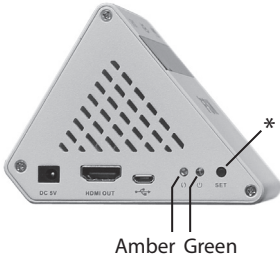
Part No.: WUH4000, WUH4000-D (Model: WUH4000)



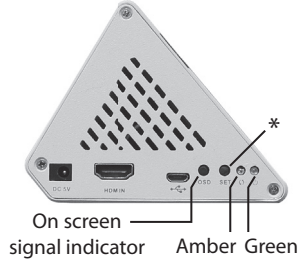
Link TX and RX and Begin Wireless Transmission WUH4000

With an active signal feeding the TX, an active destination such as a display monitor connected to the RX, and power connected to both TX and RX, wireless transmission should begin.

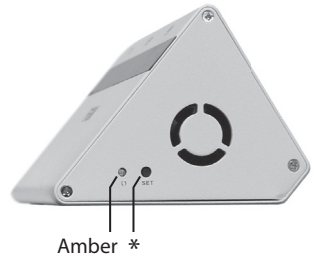
Receiver (RX) unit



Transmitter (TX) unit, side 1

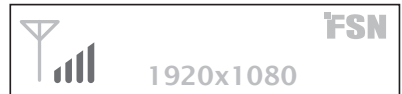


Transmitter (TX) unit, side 2



LED Indicator	State	Description
Green	Constant	Power is available to the unit.
Green	Off	Power is not available to the unit.
Amber	Slow blink	Transmitter is scanning for a matching receiver. If scanning is unsuccessful after 2 minutes, sleep mode will occur.
Amber	Fast blink	Transmitter and receiver are communicating.
Amber	Constant	Transmitter and receiver have established a connection.
Amber	Off	1. Power is not available to the unit. 2. The unit is in sleep mode.

OSD button: Press to display an on-screen signal strength indicator that shows WUH4000's connection status. The status is displayed on destination monitor connected to the WUH4000 system.



Sleep Mode. If, after 2 minutes, there is no active source signal or destination recognized by a WUH4000 system, the system will go into sleep mode and the amber LED will turn off. To exit sleep mode, establish an active source signal and destination. Briefly pressing the SET button will also exit sleep mode.

* **SET button:** Briefly press the SET button to exit sleep mode.

The SET button is also used for advanced RX / TX unit pairing and factory reset procedures. Contact FSN Medical Technologies for detailed information.

NOTE: All WUH4000 TX and RX units sold together are programmed at the factory, and should connect automatically. If not purchased together, then unit pairing or factory reset procedures may need to be performed. Contact FSN Medical Technologies for detailed information.

Specification WUH4000

General

Item	Feature	Description	
Main	Wireless standard	60 GHz WiHD frequency	
	Stream video	Uncompressed video stream up to 4K/UHD resolution	
	Latency	Less than one frame	
	Range	10 meter, (NLOS)	
	Signal strength	On-screen indicator	
	Antenna scheme	Beam steering technology	
	Antenna type	Onboard integrated antenna array	
	Private data encryption	256-bit AES	
Video interface	Input/Output signal	DVI,HDMI (supports 4K HDMI 2.0)	
	Content compliance	HDCP 2.2	
	Resolution	FHD	480i/480p@60Hz 576i/576p@50Hz 720p@50/60Hz 1080i@50/60Hz 1080p@24/30/50/60Hz
		UHD	4K (3840 x 2160) @ 24/30/60Hz (input) 4K (3840 x 2160) @ 24/30Hz (output)
Audio interface	Audio output	Up to 7.1 channels, high bit rate	
	Audio format	LPCM channels 2, 6, 8 S/PDIF channels 6, 8	
Control/status indicator	Wireless link/set	TX: 2 x SET buttons RX: 1 x SET button	
		TX: 2 x link LED (amber) RX: 1 x link LED (amber)	
	Signal strength control	TX: OSD button on/off	
	Power	LED (green)	
RF	Radiated Power (EIRP)	TX HRP: 28.3 dBm (average) RX LRP: 25.3 dBm (average)	
Power	Requirement	Adapter Technology, Inc. ATM036T-P050 VAC: 100-240 (50/60 Hz) 5V/5A DC	
	Consumption	TX: 15W RX: 3.5W	

Specification (continued) WUH4000

Item	Feature	Description
Physical	Weight	TX: 0.57 kg (1.25 lbs.) RX: 0.23 kg (0.5 lbs.) Shipping package: TBD
	Dimension	TX: 75.8 (H) x 140 (W) x 98.25 (D) mm 2.98 (H) x 5.51 (W) x 3.87 (D) inches RX: 75.8 (H) x 55 (W) x 98.25 (D) mm 2.98 (H) x 2.17 (W) x 3.87 (D) inches Shipping package: 82.6 (H) x 400 (W) x 368.3 (D) mm 3.25 (H) x 15.75 (W) x 14.5 (D) inches
Environmental	Operating temp.	32F~104F (0C~ 40C)
	Humidity	5%~85%
	Storage temp	-4F ~ 140F (-20C~60C)
	Humidity	10%~85%
	MTBF	30000 hours
Compliance	FCC	Part 15 Subpart B Class B
	FCC ID	UK2-SII-SK63102 UK2-SII-SK63101
	IC ID	6705A-SIISK63102 6705A-SIISK63101
	CE (RED)	EN 301-489-1 EN 62311 EN 60950-1 EN 302-567
	CE (UL EMC)	EN 60601-1, IEC/EN 60601-1-2
	Japan	TELEC
	Korea Compliance	KCC
	VCCI Compliance	VCCI

Recycling (WEEE Directive 2012/19/EU)

Follow local governing ordinances and recycling plans regarding the recycling or disposal of this requirement.

Cleaning Instructions

Follow your hospital protocol for the handling of blood and body fluids. Clean the unit carefully with a diluted mixture of mild detergent and water. Use a soft towel or swab. Use of uncertain cleaners may cause degradation to the labels and plastic components of the product. Consult cleanser manufacturer to see if cleaning agents used are compatible with the unit. Do not allow liquid enter the unit's housing.

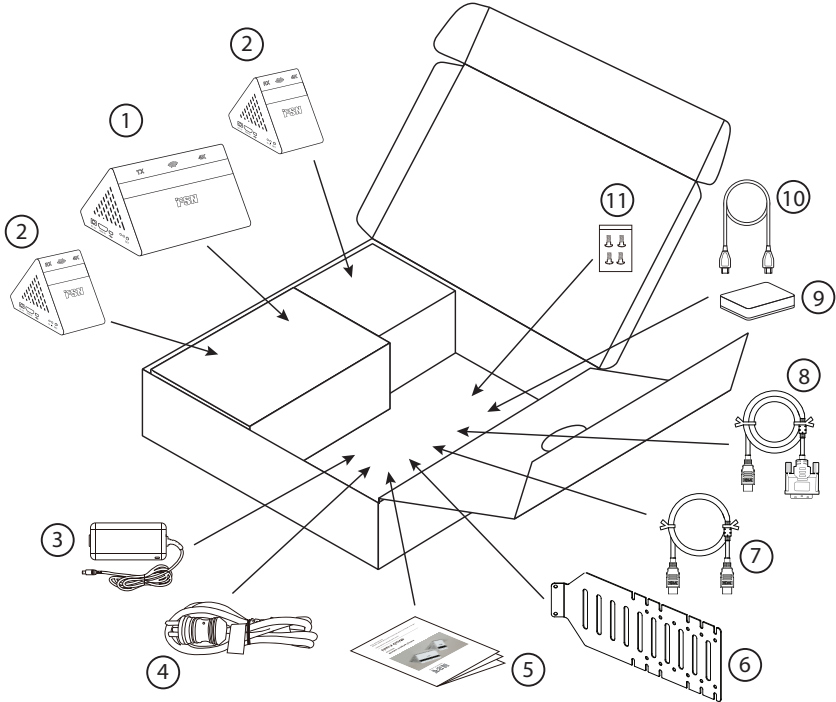
Video Resolution Timing WUH4000

Item	Feature		Description
640 x 480p(VGA)	60Hz	RGB	4:4:4 8 bits
848 x 480(WVGA)	60Hz	RGB	4:4:4 8 bits
800 x 600 (SVGA)	60Hz	RGB	4:4:4 8 bits
1024 x 768(XGA)	60Hz	RGB	4:4:4 8 bits
1280 x 1024(SXGA)	60Hz	RGB	4:4:4 8 bits
1680 x 1050 (WSXGA+)	60Hz	RGB	4:4:4 8 bits
1920 x 1200 (WUXGA)	60Hz	RGB	4:4:4 8 bits
480i	60Hz	RGB YCbCr YCbCr	4:4:4 (8/10/12 bits) 4:4:4 (8/10/12 bits) 4:2:2(8 bits)
480p	60Hz	RGB YCbCr YCbCr	4:4:4 (8/10/12 bits) 4:4:4 (8/10/12 bits) 4:2:2(8 bits)
576i	50Hz	RGB YCbCr YCbCr	4:4:4 (8/10/12 bits) 4:4:4 (8/10/12 bits) 4:2:2(8 bits)
576p	50Hz	RGB YCbCr YCbCr	4:4:4 (8/10/12 bits) 4:4:4 (8/10/12 bits) 4:2:2(8 bits)
720p	50Hz, 60Hz	RGB YCbCr YCbCr	4:4:4 (8/10/12 bits) 4:4:4 (8/10/12 bits) 4:2:2(8 bits)
1080i	50Hz, 60Hz	RGB YCbCr YCbCr	4:4:4 (8/10/12 bits) 4:4:4 (8/10/12 bits) 4:2:2(8 bits)
1080p	24Hz, 30Hz, 50Hz, 60Hz	RGB YCbCr YCbCr	4:4:4 (8/10/12 bits) 4:4:4 (8/10/12 bits) 4:2:2(8 bits)
3840x2160, 4Kx2K	24Hz, 30Hz, 60Hz (Input)	RGB YCbCr YCbCr	4:4:4 (8/10 bits) 4:2:2(8/10 bits) 4:2:2(8/10 bits)

APPENDIX Package Contents

Part No.: FHD-1TX-2RX (Model: WUH4000)

A WUH4000 system has the ability to incorporate two RX units. Both RX units can show the same image coming from a TX unit. A 1-TX 2-RX system from the factory is already paired and should link using normal procedures described in this guide.



Item	Description	Quantity
1	Wireless transmitter (TX unit)	1
2	Wireless receiver (RX unit)	2
3	Power adapter	3
4	Power cord	3
5	User guide	1
6	Monitor VESA mount bracket	3
7	HDMI 1.4 to HDMI 1.4 cable, 1.5 feet	2
8	HDMI to DVI cable, 1.5 meter*	3
9	Video splitter/adaptor (optional, if required)	2
10	Micro USB cable for power from wireless receiver to splitter/adaptor, 1.5 feet	2
11	Mounting screw packet	1

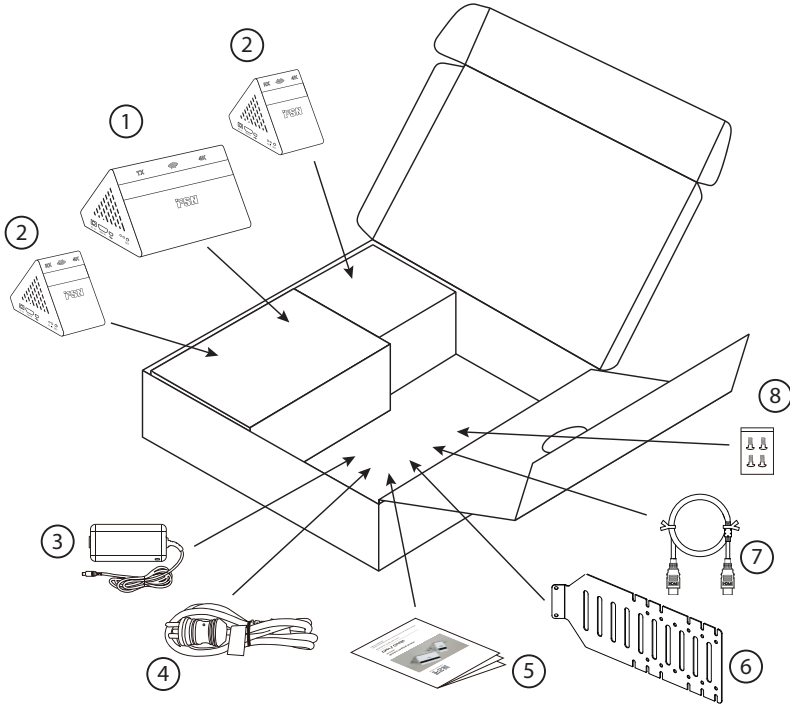
* Option is available for one of the three cables to be 3 meter.

Verify that all components for the respective package are accounted for. Inspect each component to verify that none have been tampered with in any way.

APPENDIX Package Contents

Part No.: WUH4000-D (Model: WUH4000)

A WUH4000 system has the ability to incorporate two RX units. Both RX units can show the same image coming from a TX unit. A 1-TX 2-RX system from the factory is already paired and should link using normal procedures described in this guide.



Item	Description	Quantity
1	Wireless transmitter (TX unit)	1
2	Wireless receiver (RX unit)	2
3	Power adaptor	3
4	Power cord	3
5	User guide	1
6	Monitor VESA mount bracket	3
7	HDMI 2.0 to HDMI 2.0 cable, 2 meter	3
8	Mounting screw packet	1

Verify that all components for the respective package are accounted for. Inspect each component to verify that none have been tampered with in any way.

WUH4060

Maintenance of Quality of Service WUH4060

WUH4060 is designed to maintain an adequate Quality of Service during its use in a hospital operating room environment.

Design Characteristics: Interference from other WUH4060 Devices

Using a unique mating procedure implemented during manufacture, a WUH4060 transmitter is programmed to work only with authenticated WUH4060 receivers. WUH4060 has been tested to work consistently within a 30m radius of the transmitter.

If more than one WUH4060 wireless systems are operating simultaneously in a single room, DFS frequency characteristics avoid interference between systems.

It is important to physically separate all WUH4060 units, TX or RX, from each other by a minimum distance of 1.525 meters or 5 feet.

As a result of these design considerations, it is not possible for one WUH4060 System to interfere with another WUH4060 System.

Design Considerations: Interference from other Devices

The WUH4060 is validated to be compatible with other devices that are commonly found in an operating environment, in accordance with IEC 60601-1-2. In that testing, the WUH4060 needed to maintain the following Essential Performance to ensure that its performance was adequate when the System was exposed to other electronic equipment. WUH4060 Essential Performance requires that a viewable image shown on a secondary monitor via a WUH4060 pair be consistent with the following criteria:

1. A viewable image is generated
2. There is no flickering of the image
3. There is no clipping of any edges
4. Brightness and detail of image remains consistent across the whole image

These criteria ensure that no resultant video degradation could be judged to be clinically significant.

Maintenance of Quality of Service WUH4060

For best results, verify the following:

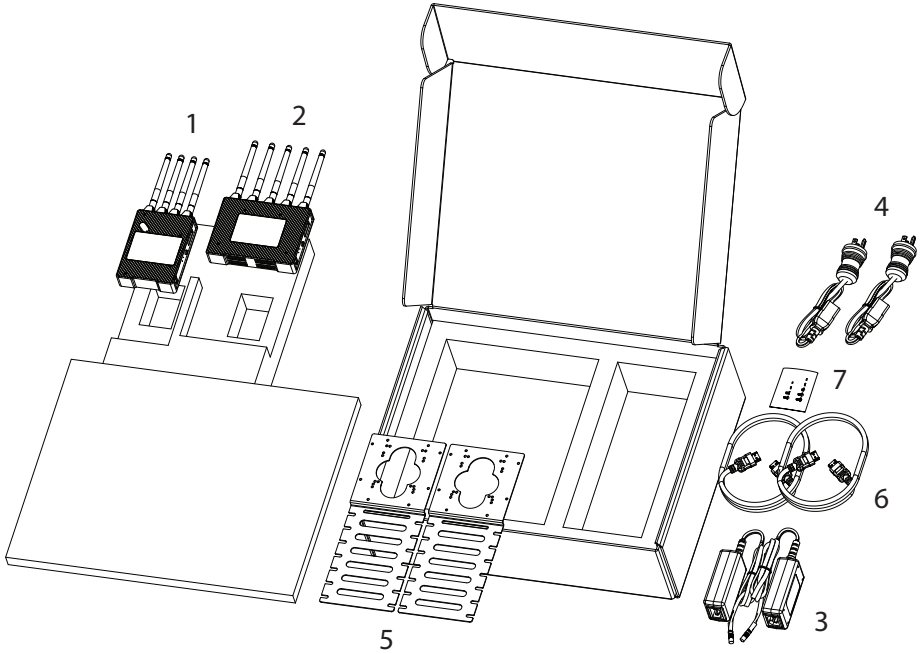
- The TX and RX units are between 1.525 meters (5 feet) and 10 meters (33 feet) apart from each other and without obstruction.
- The TX and RX are between 1.8-3 meters (6-10 feet) above the floor.
- The TX and RX are not in a confined location.

Noninterference Distances

If the WUH4060 is thought to be causing or receiving interference with any other devices, then move the devices away from each other.

The WUH4060 is not intended to be used in the vicinity of diathermy equipment. If diathermy equipment is operated around the WUH4060 and interference is suspected, turn off the WUH4060 Transmitter and Receiver.

Package Contents WUH4060



Item	Description	Quantity
1	Wireless transmitter (TX unit)	1
2	Wireless receiver (RX unit)	1
3	Power adapter	2
4	Power cord	2
5	WUH4060 VESA mount bracket	2
6	HDMI 2.0 to HDMI 2.0 cable, 2 meter	2
7	Mounting screw packet	2

Verify that all components are accounted for. Inspect each component to verify that none have been tampered with in any way.

Plan the Installation WUH4060

Identify the signal source for wireless transmission (example **A**).

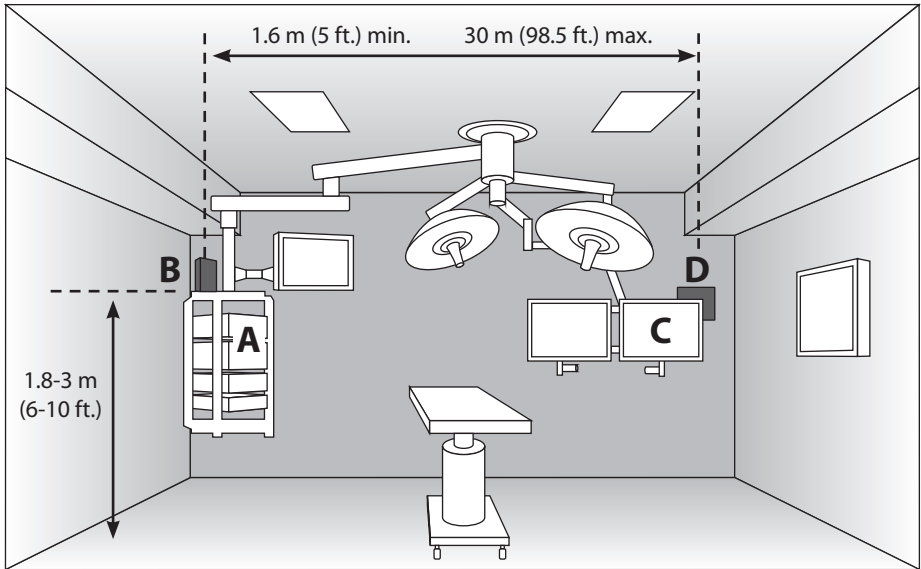
Determine the location of the WUH4060 transmitter (TX) unit (example **B**).

Find a suitable power source for the transmitter.

Identify the destination to receive the wireless signal (example **C**).

Determine the location of the WUH4060 receiver (RX) unit (example **D**).

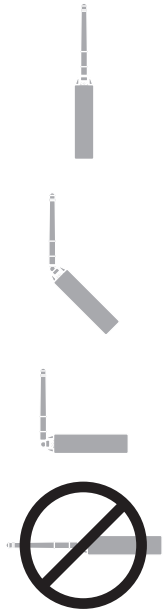
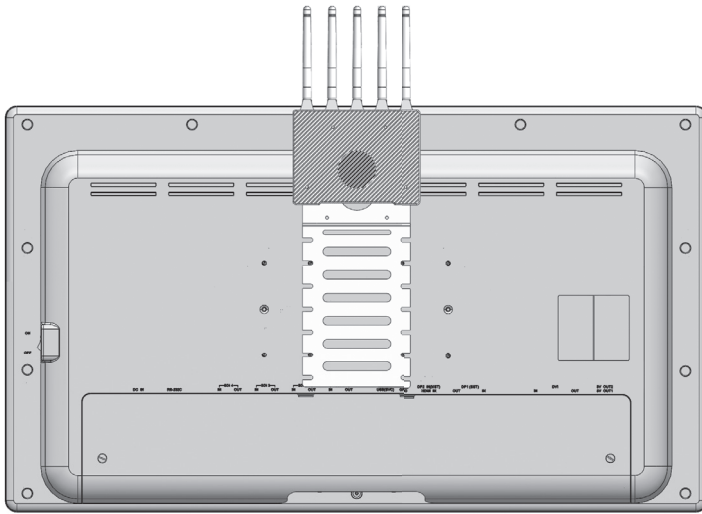
Find a suitable power source for the receiver.



The transmitter and receiver units can stand alone on a flat surface, or use a bracket to mount onto other objects such as a display monitor. It is recommended to verify that the wireless system is operating properly before mounting the TX or RX units permanently.

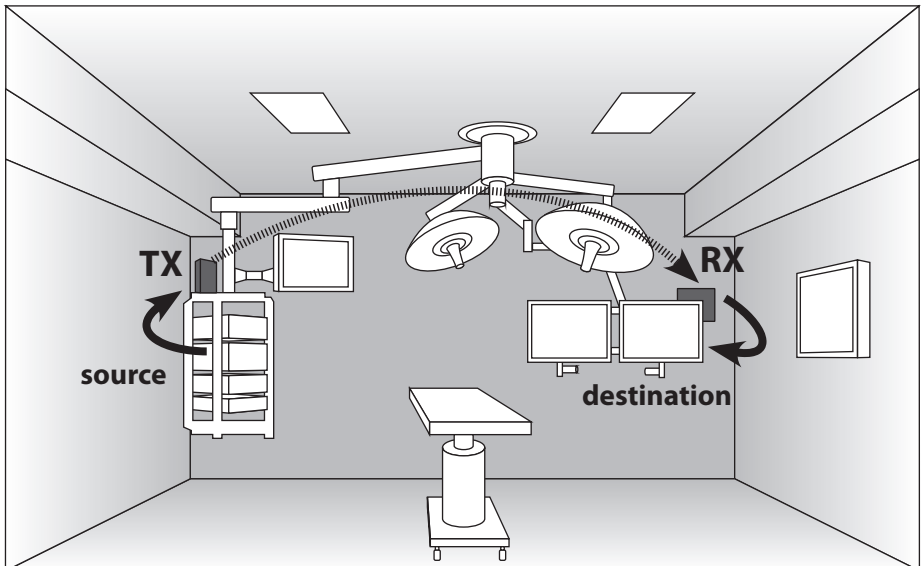
For best installation results:

- The TX and RX should be no more than 10 meters (33 ft.) apart.
- The TX and RX should be between 1.8-3 meters (6-10 ft.) above the floor.
- The TX and RX should not be in a confined location.
- All air flow vents must be clear and unblocked to prevent damage from excessive heat.



Example of the supplied VESA mount bracket attached to the back of a display monitor.

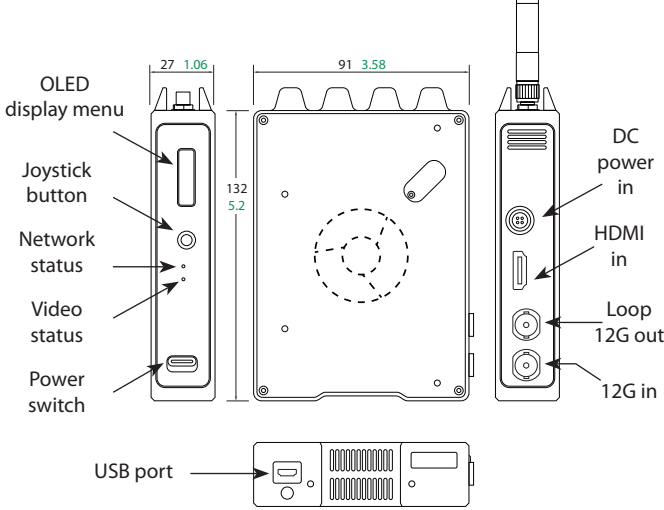
The WUH4060, RX or TX, is connected to the VESA mount bracket.



A properly operating wireless system

Panel Interface WUH4060

Transmitter



OLED display menu -

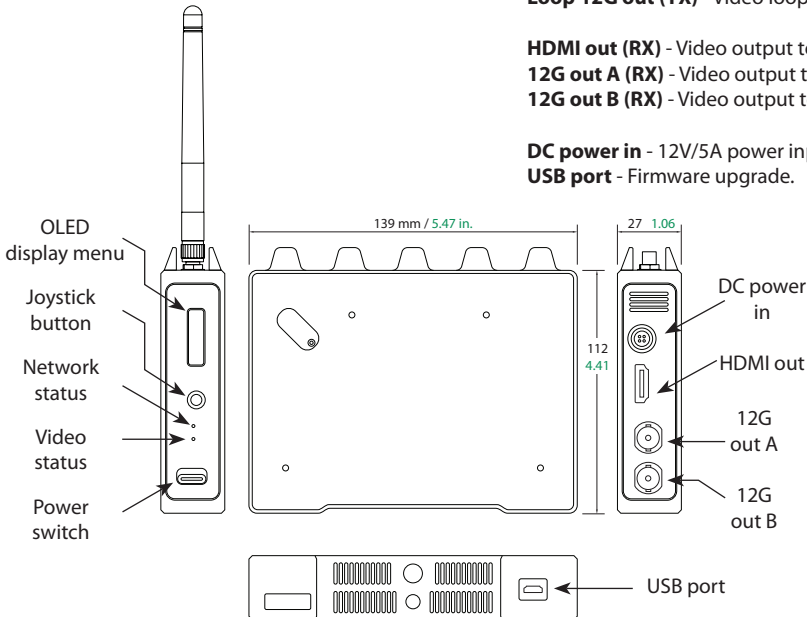
Indicates the current user mode. TX: Pair, Unpair, 3D, Firmware Version. RX: Signal Quality Graph, Pair, Unpair, Firmware Version.

Network status LED - Off = TX or RX are not paired, or power is off. Flashing = TX and RX are communicating, but not paired. On = TX and RX are paired and communicating.

Video status LED - Off = video signal is not connected, or power is off. On = TX and RX video signal is connected.

Power switch LED - Off = power is off. On = power is on.

Receiver



HDMI in (TX) - Video source input.

12G in (TX) - Video source input.

Loop 12G out (TX) - Video loop out.

HDMI out (RX) - Video output to destination.

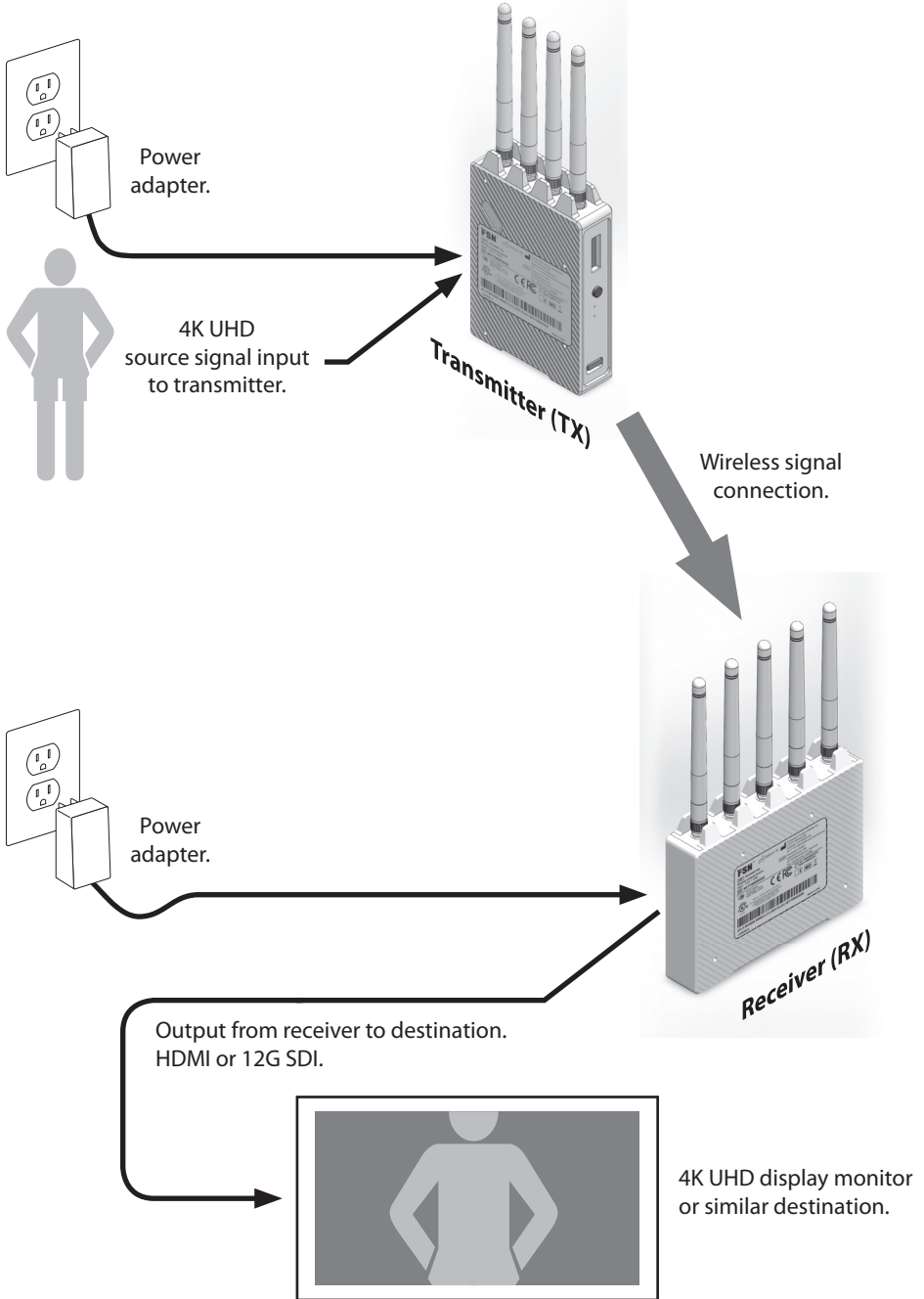
12G out A (RX) - Video output to destination.

12G out B (RX) - Video output to destination.

DC power in - 12V/5A power input.

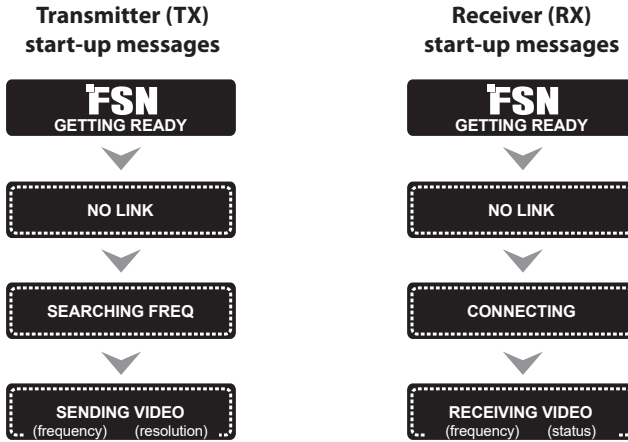
USB port - Firmware upgrade.

Typical Configuration / Directions for Use WUH4060



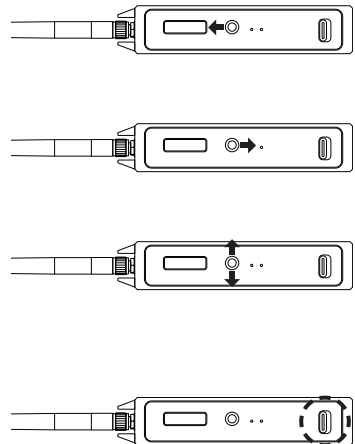
Link TX and RX and Begin Wireless Transmission WUH4060

With an active signal feeding the TX, an active destination such as a display monitor connected to the RX, and power connected to both TX and RX, wireless transmission should begin.



3D Setup

1. Prepare WUH4060 transmitter (TX) to confirm that the power is on.
2. Check the TX OLED display for Menu Lock/Unlock status. If locked, push and hold the joystick button left (toward antennas) to unlock. Use this same procedure to lock the OLED display after all steps have been completed.
3. Enter the OLED menu by pushing the joystick button right (away from antennas).
4. Search for 3D Mode by navigating with the joystick button up/down to select 3D the desired 3D mode (Auto, Side x Side, or Line Alternative) then push the joystick button right to select.
5. Exit to the main menu by pushing the joystick button twice to the left.
6. Power cycle the WUH4060 transmitter (TX) by switching the power button off, then on again. Video transmission in 3D should begin.



NOTE: Make sure that the video source and destination are properly connected and configured for 3D.

Advanced TX and RX pairing if required.

NOTE: All WUH4060 TX and RX units sold together are programmed at the factory, and should connect automatically. For advanced unit pairing, see the steps below, or contact FSN Medical Technologies for detailed information.

1. Prepare Receiver (RX). Confirm that the power on.
2. Check the RX OLED display for the Lock/Unlock menu. If Locked - push and hold the joystick left for 5 seconds to Unlock. Do the same to change Unlock to Lock.
3. Enter RX OLED menu by pushing right on the joystick.
4. Navigate the menu by pushing up or down on the joystick.
5. Select the **UNPAIR** mode by pushing right on the joystick twice. Select **PROCEED TO UNPAIR**. A message **UNPAIRING...PLEASE WAIT** is briefly displayed.
6. Next, select the **PAIR** mode by pushing right on the joystick once to start pairing. A message **PAIRING SEARCHING FOR TX** is displayed.

7. Prepare Transmitter (TX). Confirm that the power on.
8. Check the TX OLED display for the Lock/Unlock menu. If Locked - push and hold the joystick left for 5 seconds to Unlock. Do the same to change Unlock to Lock.
9. Enter TX OLED menu by pushing right on the joystick.
10. Navigate the menu by pushing up or down on the joystick.
11. Select the **PAIR** mode by pushing right on the joystick once. A message **PAIRING** is briefly displayed.
12. If successful, the TX OLED will display the message **PAIRING COMPLETED SUCCESSFULLY**.
13. If the OLED message shows **PAIRING FAILED**, repeat items 3 through 12.

Specification WUH4060

General

Item	Feature		Description
Main	Wireless standard		WHDI
	Frequency band		5 GHz
	Max video resolution		4K60 Hz (DCI/UHD)
	Input/Output signal		HDMI 2.0, 12G SDI
	Video stream		Uncompressed stream
	Latency		Near zero (<1ms)
	Range		30 meters, (line of sight)
	Signal strength		OSD (On/Off option)
	Private data encryption		256-bit AES, RSA 1024 keys
	Private ID protection		Unique RFID
Video Interface	Resolution		4Kp 23.98/24/25/29.97/30/50/59.94/60 1080p 23.98/24/25/29.97/30/50/59.94/60 1080psf 23.98/24/25/29.97/30 1080i 50/59.94/60 720p 50/59.94/60 480i 29.97/57.6i25
	Color format	HDMI 2.0	YUV 4:2:2 10/12-bit (4K50p to 60p formats only) YUV 4:2:0 8-bit RGB/YUV 4:4:4 10-bit (All formats except 4K50p to 60p) RGB/YUV 4:4:4 8-bit
		12G	YUV 4:2:2 10-bit YUV 4:2:2 12-bit (All formats except 4K50 to 60p) YUV/RGB 4:4:4 10-bit (All formats except 4K50p to 60p)
Audio Interface	Audio channel		2 channels
	Audio format		PCM 48Khz 24bit
Maintenance	FW upgrade		Micro USB 2.0
Control/Status indicator	3 x (LED indicators)		1x Power On/Off indicator 1x Wireless Link indicator 1x Source Connected indicator
	Signal strength display		OSD signal quality graph via RX menu On/Off
	Power		On/Off Switch
RF	Radiated power (EIRP)		TX: 10 dBm, RX: 12 dBm
	Frequency range		Non-DFS Frequencies: 5.190 ~ 5.230 GHz and 5.755 ~ 5.830 GHz DFS Frequencies: 5.270 ~ 5.710 GHz
	Antenna		TX: 4 (max), RX: 5 (max)

Specification (continued) WUH4060

Item	Feature	Description
Power	Requirement	12V/3A DC
	Consumption	TX: 20 W, RX: 18W
Physical attributes	Weight	TX: 0.36 kg (0.79 lbs.) RX: 0.43 kg (0.95 lbs.) Shipping package: 3.81 kg (8.4 lbs.)
	Dimension	TX: 132 (H) x 91 (W) x 27 (D) mm 5.2 (H) x 3.58 (W) x 1.06 (D) inches RX: 112 (H) x 139 (W) x 27 (D) mm 4.41 (H) x 5.47 (W) x 1.06 (D) inches Shipping package: 152 (H) x 508 (W) x 381 (D) mm 6 (H) x 20 (W) x 15 (D) inches
Environment	Operation	Temperature: 32F~104F (0C~ 40C) Humidity: 5%~85%
	Storage	Temperature: -4F ~ 140F (-20C~60C) Humidity: 10%~85%
Compliance	FCC CFR 47	FCC Part15 Subpart E Class B FCC Part15 Subpart B Class A
	FCC ID	TX: VQSAMN41012 RX: VQSAMN42012
	IC ID	TX: 7680A-AMN41012 RX: 7680A-AMN42012
	CE EMC, RED	EN 55011:209 +A1:2010 EN 61000-3-2:2014 EN 61000-3-3:2013 EN 301-489-1 v2.1.1 EN 301-893 v2.1.1 EN 62311 EN 300-328 v2.1.1
		EN 60601-1 EN 60601-1-2:2015
	VCCI	VCCI-CISPR 32:2016

Recycling (WEEE Directive 2012/19/EU)

Follow local governing ordinances and recycling plans regarding the recycling or disposal of this requirement.

Cleaning Instructions

Follow your hospital protocol for the handling of blood and body fluids. Clean the unit carefully with a diluted mixture of mild detergent and water. Use a soft towel or swab. Use of uncertain cleaners may cause degradation to the labels and plastic components of the product. Consult cleanser manufacturer to see if cleaning agents used are compatible with the unit. Do not allow liquid enter the unit's housing.

Video Resolution Timing WUH4060

Resolution H x V	Type	Frame Rate	Color Space	Color Depth	Sub-Sampling	HDMI 2.0	12G SDI
4096x2160	DCI	60Hz,59.94Hz,50Hz,30Hz,29.97Hz,25Hz,24Hz,23Hz	RGB, YUV	8-bit	4:4:4	Y	--
4096x2160	DCI	30Hz, 29.97Hz, 25Hz,24Hz,23Hz	YUV	10-bit	4:4:4	Y	Y
4096x2160	DCI	60Hz,59.94Hz,50Hz,30Hz,29.97Hz,25Hz,24Hz,23Hz	YUV	8-bit	4:2:2	Y	--
4096x2160	DCI		YUV	10-bit	4:2:2	Y	Y
4096x2160	DCI		YUV	12-bit	4:2:2	Y	--
4096x2160	DCI	60Hz, 59.94Hz, 50Hz	YUV	8-bit	4:2:0	Y	--
3840x2160	UHD	60Hz,59.94Hz,50Hz,30Hz,29.97Hz,25Hz,24Hz,23Hz	RGB, YUV	8-bit	4:4:4	Y	--
3840x2160	UHD	30Hz, 29.97Hz, 25Hz,24Hz,23Hz	YUV	10-bit	4:4:4	Y	Y
3840x2160	UHD	60Hz,59.94Hz,50Hz,30Hz,29.97Hz,25Hz,24Hz,23Hz	YUV	8-bit	4:2:2	Y	--
3840x2160	UHD		YUV	10-bit	4:2:2	Y	Y
3840x2160	UHD		YUV	12-bit	4:2:2	Y	--
3840x2160	UHD	60Hz, 59.94Hz, 50Hz	YUV	8-bit	4:2:0	Y	--
1080p	HD	60Hz,59.94Hz,50Hz,30Hz,29.97Hz,25Hz,24Hz,23Hz	RGB, YUV	8-bit	4:4:4	Y	--
1080p	HD		YUV	10-bit	4:4:4	Y	Y
1080p	HD		YUV	8-bit	4:2:2	Y	--
1080p	HD		YUV	10-bit	4:2:2	Y	Y
1080p	HD		YUV	12-bit	4:2:2	Y	--
1080i	HD	30Hz,29.97Hz,25Hz	RGB, YUV	8, 10, 12-bit	4:4:4	Y	--
1080i	HD	30Hz,29.97Hz,25Hz	YUV	10-bit	4:2:2	Y	Y
720p	HD	60Hz,59.94Hz,50Hz	RGB	8, 10-bit	4:4:4	Y	--
720p	HD		YUV	10-bit	4:2:2	Y	Y
576i	SD	25Hz (PAL)	RGB, YUV	8-bit	4:4:4	Y	--
480i	SD	29.97Hz (NTSC)	RGB, YUV	8-bit	4:4:4	Y	--
576i	SD	25Hz (PAL)	YUV	10-bit	4:2:2	N	Y
480i	SD	29.97Hz (NTSC)	YUV	10-bit	4:2:2	N	Y

3D Timing Format Support

Format	Signal	Resolution	Frame Rate	3D Mode (WUH4060 OLED menu)
Line by Line, Side by Side, Top Down	HDMI or 12G-SDI	4K (DCI, UHD)	60Hz,59.94Hz,50Hz	On
		1080p		Off (default)



Thank you for choosing our product.

Service

Contact the appropriate customer service listed below for product information or assistance.

Warranty

One year, parts and labor.

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Specifications are subject to change with or without notice.



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